

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P017597WO	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2004/003273	International filing date (day/month/year) 24/09/2004	(Earliest) Priority Date (day/month/year) 01/10/2003
Applicant  DANISCO A/S		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).



- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**METHOD TO TREAT THE SIDE EFFECTS ASSOCIATED WITH NON STEROIDAL ANTI-INFLAMMATORY DRUGS USING MICROORGANISMS OF THE GENUS BIFIDOBACTERIUM**

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/003273

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K35/74 A61K31/19 A61K31/205 A61P29/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/010297 A (ALIMENTARY HEALTH LIMITED; COLLINS, JOHN, KEVIN; O'SULLIVAN, GERALD, C) 6 February 2003 (2003-02-06)  page 2, lines 15-17 page 3, column 28 - page 4, column 11 page 31, lines 21-24 ----- -/--	4,8-15, 17-19, 21, 23-27, 29-32,34

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

9 March 2005

Date of mailing of the international search report

30. 05. 2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

ALCONADA RODRIGUEZ

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/003273

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	UEJIMA M ET AL: "ROLE OF INTESTINAL BACTERIA IN ILLEAL ULCER FORMATION IN RATS TREATED WITH A NONSTEROIDAL ANTIINFLAMMATORY DRUG" MICROBIOLOGY AND IMMUNOLOGY, TOKYO, JP, vol. 40, no. 8, 1996, pages 553-560, XP008008800 ISSN: 0385-5600 table 4 page 559, left-hand column, paragraph 2 page 556, right-hand column, last paragraph - page 558, left-hand column, paragraph 1 -----	5-10, 22-27, 29-31,34
X	US 5 922 375 A (LUCHANSKY ET AL) 13 July 1999 (1999-07-13) column 1, line 65 - column 2, line 45 column 5, lines 2-5 -----	20

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/003273

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 17-19 and 21-27 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
  
1-15, 17-27, 29-32 and 34 (in part)

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15, 17-27, 29-32 and 34 (in part)

Use of a microorganism for the manufacture of a medicament for use in increasing the amount of COX-1 mRNA in a cell and for the treatment of inflammatory and cancer diseases, or to prevent side-effects associated with NSAIDs, pharmaceutical preparations comprising a microorganism and an NSAID, methods for treatment of inflammatory and cancer diseases or for preventing side effects associated with NSAID administration using said microorganism, pharmaceutical packs comprising a microorganism and a NSAID or a microorganism and betaine.

---

2. claims: 1-15, 17-27, 29-32 and 34 (in part)

As invention 1 but wherein the pharmaceutical agent is acetate (a microorganism metabolite).

---

3. claims: 1-15, 17-27, 29-32 and 34 (in part)

As invention 1 but wherein the pharmaceutical agent is lactate (a microorganism metabolite)

---

4. claims: 16, 28, 33 and 35-39

As invention 1 but wherein the pharmaceutical agent is a combination of Bifidobacterium and/or a metabolite thereof and betaine.

---

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/003273

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03010297	A	06-02-2003	BR 0211442 A	09-11-2004
			CA 2454803 A1	06-02-2003
			CN 1561387 A	05-01-2005
			EP 1409644 A1	21-04-2004
			WO 03010297 A1	06-02-2003
			IE 20020626 A1	19-03-2003
			JP 2005508617 T	07-04-2005
			MX PA04000738 A	08-07-2004
			US 2003092163 A1	15-05-2003
			ZA 200400555 A	21-09-2004
-----				
US 5922375	A	13-07-1999	US 5902743 A	11-05-1999
-----				